

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An electric discharge machining method for forming a cavity, comprising the steps of:  
    setting a removal surface area (S);  
    setting a dimension of material to be removed (d) from a workpiece and  
machining conditions;  
    ~~setting a plurality of storing, utilizing a storage device, a database correlating a~~  
removal volume rate (Vm) with machining conditions;  
    ~~obtaining a removal volume (V) corresponding to a volume of material to be~~  
~~removed from a workpiece based on the removal surface area (S) and the dimension of material~~  
~~to be removed (d);~~  
    ~~obtaining a removal volume rate (Vm) corresponding to the set plurality of~~  
~~machining conditions;~~  
    ~~determining extracting, utilizing a calculating device, the removal volume rate~~  
(Vm) corresponding to the set machining conditions from the storage device, and calculating,  
utilizing the calculating device, a machining time (T) based on the removal surface area  
(S), volume (V) the dimension of material to be removed (d) and the removal volume rate (Vm);  
and  
    ~~starting electric discharge machining of the workpiece in accordance with the set~~  
~~plurality of machining conditions; and~~  
    completing electric discharge machining of the workpiece with increase in  
dimension of the cavity when the machining time (T) has elapsed from ~~the starting of~~ electric  
discharge machining.

2-6. (Canceled)